ARGUMENTS

Claim 1 has been amended to recite "an antenna for receiving incoming signals carrying data" as supported on page 3, lines 16-19, of the specification as originally filed.

The present amendment adds no new matter to the application.

The Invention

The present invention pertains broadly to an active transponder device associated with identification systems or transaction systems of various natures. More particularly, in a first embodiment in accordance with the present invention, an active transponder is provided that includes: (a) an electronic unit arranged so as to control several applications or operating modes; (b) an antenna for receiving incoming signals carrying data; and (c) an electric power supply connected to said electronic unit, wherein said electronic unit includes: (d) a data processing unit, (e) means for amplifying incoming signals received by said antenna, and (f) means for validating the incoming signals as a function of mean induced voltages in said antenna, and wherein the data processing unit includes means for varying the maximum communication distance to a reader or transceiver.

Various other embodiments in accordance with the present invention are recited in the dependant claims. An advantage of the present invention as claimed is that an active transponder is provided that solves the security problem associated with multi-application active transponders by varying the maximum communication distance between the transponder and a reader or transceiver as function of the selected application.

The Rejection

Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Tarbouriech (GB 2,321,746 A) in view of Ovard et al. (U.S. Patent 6,356,764 B1).

Applicants respectfully traverse the rejection and request reconsideration of the application for the following reasons.

Applicants' Arguments

A patentability analysis under 35 U.S.C. § 103 requires (a) determining the scope and content of the prior art, (b) ascertaining the differences between the prior art and the claimed subject matter, (c) resolving the level of ordinary skill in the pertinent art, and (d) considering secondary considerations that may serve as indicia of nonobviousness or obviousness. Graham v. John Deere Co. of Kansas City, 148 U.S.P.Q. 459, 467 (1966). Furthermore, a proper rejection under Section 103 further requires showing (1) that the prior art would have suggested to a person of ordinary skill in the art that they should make the claimed device or carry out the claimed process, (2) that the prior art would have revealed to a person of ordinary skill in the art that in so making or doing, there would have been a reasonable expectation of success, and (3) both the suggestion and the reasonable expectation of success must be found in the prior art and not in the applicants' disclosure. In re Vaeck, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991).

In the present case, the Examiner's Section 103(a) rejection is untenable and must be withdrawn because (1) the scope and content of the art is insufficient to render the presently claimed invention obvious, and (2) the Examiner has not provided a suggestion, grounded in prior art, to combine the references.

The Tarbouriech Reference (GB 2,321,746)

GB 2,321,746 A to Tarbouriech (hereafter, the Tarbouriech reference) teaches a "portable data carrier operating method" and a circuit suitable for carrying out this method (See Figures 2 and 3). The power circuit (10) diagrammed in Figure 2 includes a power source (11) connected to a power level monitor (12) and to a regulator (19), which has two power output terminals (21). The power source (11) could be an external battery (page 2, lines 3-35), or a receiving coil (26) as shown in Figure 3. When the receiving coil (26) is employed as the power source (11), it is a component in an LC inductance circuit and is capable of receiving transmitted power signals (page 3, lines 28-34); however, there is nothing in the Tarbouriech reference to teach, or suggest, that the receiving coil (26) can receive data signals. The receiving coil (26) is only used for receiving energy, but not for receiving data signals, such as, for example, RF signals carrying data.

In other words, the Tarbouriech reference does not teach, or even suggest, an "antenna for receiving incoming signals carrying data" as recited in claim 1 of the present application. The Examiner contends that "Tarbouriech...discloses the transponder as comprising an antenna (receiving coil 26)(pg. 3, line 33 and Fig. 33)" (See Office Action, dated February 10, 2005, at 2, lines 19-21). However, the Examiner's characterization of the teachings of the Tarbouriech reference is incomplete and misleading.

The Tarbouriech reference teaches that the "receiving coil 26...is tuned to receive power that is transmitted at a frequency, for example 13.56MHz" (emphasis added)(page 3, lines 31-34). Therefore, a person of ordinary skill in the art would realize that the "receiving coil" (26) is constructed to receive power transmitted by electromagnetic waves, which is not

an antenna constructed to receive "incoming signals carrying data" in accordance with claim 1 of the present application. The Tarbouriech reference does not teach, or even suggest, "an antenna for receiving incoming signals carrying data" as recited in claim 1 of the present application.

The Tarbouriech reference also teaches a power level monitor (12), which monitors the level of power that is coupled to the portable data carrier (page 3, lines 1-4), is connected to send an output to power level detection circuit (13). Power level detection circuit (13) is connected to send output to control interface (17), which sends output used to control circuitry that facilitates performing operations and transactions within the portable data carrier (page 3, lines 22-27).

While the Examiner asserts that the Tarbouriech reference teaches a transponder comprising an antenna, provided by receiving coil (26), and a power source (11) that could be a battery (Office Action dated February 10, 2005, at 2, lines 19-23), it is plain the Examiner has mischaracterized the teachings of Tarbouriech. It is well established that a fair reading must be given to the teachings of a reference when viewed as a whole. In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). In the present case, the Examiner has not given a fair reading to the teachings of the Tarbouriech reference because Tarbouriech teaches, as a whole, that "[t]he method of coupling power to the portable data carrier could be via connecting the carrier to an external battery, from receiving power transmitted at various frequencies, or other methods." (emphasis added)(page 2, line 32, to page 33, line 1). Therefore, the Tarbouriech reference teaches that the power source (11) is an external battery or a receiving coil, but the Tarbouriech does not teach, or even suggest, that the device would include both an external battery and a receiving coil as the Examiner contends. In fact, the

Tarbouriech reference does not teach any communication of information through the circuit it discloses.

In contrast, claim 1 in accordance with the present invention recites an "active transponder" that includes (a) "an electronic unit," (b) "an antenna for receiving incoming signals," and (c) "an electric power supply connected to said electronic unit." The Tarbouriech reference does not teach, or even suggest, this combination of elements.

Tarbouriech teaches that the power source (11) is either a battery (page 2, lines 3-35) or a tuned LC circuit that includes receiving coil (26), (page 3, lines 31-34). Tarbouriech neither teaches, nor suggests, that the power circuit (10) has both a battery and a receiving coil. Instead, what Tarbouriech teaches is that when the power source (11) is a battery, the power circuit (10) has no receiving coil. In this embodiment, there would be no "antenna."

On the other hand, when the power source is a receiving coil (26) of an LC circuit, the device is not an "active transponder" as recited by claim 1. Instead, it is a passive circuit receiving power from a remote source (page 3, lines 31-34). The present specification expressly distinguishes "passive transponders which draw their energy from received electromagnetic signals" from an "active transponder" which "has an internal electric power supply which powers the electronic circuits independently of the level of induced voltage in the antenna of the transponder" (present specification, page 1, lines 5-8).

However, these are not the only deficiencies in the teachings provided by the Tarbouriech reference. The control interface (17) taught by Tarbouriech is not an "electronic unit arranged so as to control several applications or operating modes," wherein the "electronic unit" includes (a) a "data processing unit;" (b) "means for amplifying the incoming signals received by said antenna;" and (c) "means for validating the incoming

signals as a function of mean induced voltages in said antenna" as recited in claim 1. In fact, no structure taught in the power circuit (10) of Tarbouriech has these claimed features.

As noted by the Tarbouriech reference, the circuit (10) is solely designed to determine if the amount of coupled power is sufficient to complete a transaction when the transaction is initiated by a portable data carrier, such as carrier (200), (See Abstract, and Figure 4). The power circuit (10) operates solely to determine whether to allow a transaction when there is sufficient power to complete the transaction or to prevent the portable data carrier from initiating a transaction when there is insufficient power to complete the operation (See Abstract). Consequently, the device taught by the Tarbouriech reference fails to teach, or event suggest "an electronic unit" having the three claimed features described above, as well as many other features of the presently claimed invention.

While Tarbouriech teaches carrier (200) that incorporates the power circuit (10) or (30) and logic circuit (202), Tarbouriech additionally does not teach, or even suggest, as conceded by the Examiner (Office Action, dated February 10, 2005, at 3, lines 8-9), a "means for varying the maximum communication distance" as recited in claim 1.

The Ovard Patent (US 6,356,764 B1)

U.S. Patent 6,356,764 B1) to Ovard et al. (hereafter, the Ovard Patent) teaches "wireless communication systems, interrogators and methods of communicating within a wireless communication system" wherein a wireless communication system (10) includes a single interrogator housing (14) and associated circuitry to service multiple communication ranges (15) for communicating with remote communication devices (12) located in the communication ranges (15), (See col. 4, lines 27-46, and Figure 1).

However, the communication circuits (106) taught by Ovard, along with the interrogator housing (14), are part of the interrogator (26) and are not part of a remote transponder, such as remote communication device (12), (col. 1, lines 18-37; col. 2, lines 7-19; and col. 4, lines 27-58).

Therefore, the Ovard Patent teaches a interrogator housing (14) with associated circuitry of an interrogator (26), which a person skilled in the art would recognize is a reader device, wherein the associated circuitry (106) and (120) is configured to communicate with the remote communication devices (12) regardless of the varying distances (col. 5, lines 8-22). Furthermore, the Ovard Patent teaches that the communication distance is determined by adjusting power level of a signal sent by the interrogator (26), (col. 11, line 45, to col. 12, line 64). The Ovard Patent does not teach, or even suggest, that the remote communication devices (12) include circuitry for varying the communication distance. Consequently, the Ovard Patent does not teach, or even suggest, an "active transponder" including "means for varying the maximum communication distance to a reader" as recited in claim 1 of the present application

However, this is not the only deficiency of the teachings of the Ovard Patent. The Ovard Patent also does not teach, or even suggest, an "active transponder" having an "electronic unit" that includes (a) a "data processing unit;" (b) "means for amplifying the incoming signals received by said antenna;" and (c) "means for validating the incoming signals as a function of mean induced voltages in said antenna" as recited in claim 1.

In fact, when properly construed, the Ovard Patent teaches a "transponder" (16) connected to battery (18) and to an antenna (44) for receiving radio frequency and an antenna (46) for transmitting radio frequency (col. 5, lines 35-67, and Figures 2 and 3). In Figure 4,

the Ovard Patent teaches that transponder (16) includes receiver (30), transmitter (32), microcontroller (34), wake up timer and logic circuit (38), and a bias voltage and current generator (42). The Ovard Patent simply does not teach the transponder (16) includes a "means for varying the maximum communication distance to a reader" and an "electronic unit" comprising a "data processing unit," "means for amplifying the incoming signals received by said antenna" and "means for validating the incoming signals as a function of mean induced voltages in said antenna" as recited in claim 1 of the present application.

Summary of the Scope of the Art

The Examiner's Section 103(a) rejection is untenable and must be withdrawn because neither the Tarbouriech reference, nor the Ovard Patent, teach or even suggest an "active transponder" including: (i) an "electronic unit" comprising (1) a "data processing unit," (2) "means for amplifying the incoming signals received by said antenna" and (3) "means for validating the incoming signals as a function of mean induced voltages in said antenna," and (ii) that the "data processing unit includes means for varying the maximum communication distance to a reader" as recited in claim 1 of the present application.

While the Ovard Patent teaches circuitry in the "interrogator" (i.e., a reader) for varying the communication distance of the interrogator (26) by adjusting the power level of the signal sent by the interrogator, the present invention is very different. In the present invention, the "means for varying the communication distance as a function of the application selected" is a component of the "active transponder" and not of an interrogator. Furthermore, the "means for varying communication distance" in accordance with the present invention does not act on the power level of the signal sent by the transponder. In

fact, other "means for amplifying incoming signals" and "means for validating incoming signals" are provided, which are not components of the "data processing unit" and which operate to process the signals received by the transponder.

Lack of Proper Motivation to Combine

In the present case, the Examiner proposes combining the teachings of Ovard pertaining to an interrogator to modify the passive transponder taught by Tarbouriech in order to meet the limitations of the presently claimed invention. As discussed above, any such combination would still fail to teach all of the subject matter recited in claim 1 of the present invention. In addition, the Ovard Patent teaches a transponder (16), and there is no teaching in the Ovard Patent to suggest that the circuitry (106), (120) of the interrogator (26) should be applied to the transponder (16) taught by Ovard. It is clear that the application of the circuitry of the interrogator taught by Ovard to the transponder taught by Tarbouriech is not derived from these references. Instead, the Examiner is impermissibly employing the teachings of the references as a haphazard mosaic in an attempt to create a facsimile of the claimed invention. Northern Telecom, Inc. v. Datapoint Corp., 15 U.S.P.Q.2d 1321, 1323 (Fed. Cir. 1990).

Conclusion

The rejection under 35 U.S.C. §103(a) based on the combination of the Tarbouriech reference and the Ovard Patent is untenable and should be withdrawn because no combination of these references can teach, or even suggest, an "active transponder" including an "electronic unit" that includes (a) a "data processing unit," (b) "means for

amplifying incoming signals received by said antenna," and (c) "means for validating incoming signals as a function of mean induced voltages in said antenna," wherein the "data processing unit" includes (d) "means for varying the maximum communication distance" as recited in claim 1.

In addition, the proposed combination of the Tarbouriech reference and the Ovard Patent lacks a proper suggestion grounded in the art. In fact, the Examiner's contention that Ovard suggests the application of circuitry from an interrogator to a transponder is nowhere to be found in the Ovard Patent, which teaches completely different circuits for both an interrogator and a transponder.

For all of the reasons stated above, claims 1-7 are in condition for allowance and a prompt notice of allowance is earnestly solicited. Questions are welcomed by the below signed attorney for the Applicants.

Respectfully submitted,

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